
COMBINED DECLARATION AND POWER OF ATTORNEY(ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL,
DIVISIONAL, CONTINUATION OR CIP)

As a below named inventor, I hereby declare that:

TYPE OF DECLARATIONThis declaration is of the following type: *(check one)*

- ☒ Original
☐ Supplemental
☐ Design

- ☐ National Stage PCT
☐ Divisional
☐ Continuation
☐ Continuation-in-Part (CIP)

INVENTORSHIP IDENTIFICATION

NOTE: *If the inventors are each not the inventors of all the claims an explanation of the facts, including the ownership of all the claims at the time the last claimed invention was made, should be submitted.*

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

IMPROVED CHEMICAL LEAVENING INGREDIENTthe specification of which: *(complete (a), (b) or (c))*

- (a) ☒ is attached hereto.
- (b) ☐ was filed on _____ as
☐ Serial No. 08/ _____ or
☐ Express Mail No. _____, as Serial No. not yet known
and was amended on _____. *(If applicable)*
- (c) ☐ was described and claimed in PCT International Application No. PCT/
filed on _____ and as amended under PCT Article 19 on _____. *(If any)*

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above, and that the filing of said specification, if heretofore filed, was authorized by me.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

CLAIM OF PRIORITY OF EARLIER FOREIGN APPLICATION(S) UNDER 35 U.S.C. §119(a)-(d)

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

(List prior foreign/PCT application(s) filed within 12 months (6 months for design) prior to this U.S. application.)

NOTE: Where item (c) is entered above and the International Application which designated the U.S. claimed priority check item (e), enter the details below and make the priority claim.

| COUNTRY (orPCT) | APPLICATION NO. | DATE OF FILING (Day/Month/Year) | PRIORITY CLAIMED UNDER 35 USC §119 | |
|--------------------|-----------------|------------------------------------|---------------------------------------|-----------------------------|
| | | | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| | | | <input type="checkbox"/> YES | <input type="checkbox"/> NO |

CLAIM FOR BENEFIT OF PRIOR U.S. PROVISIONAL APPLICATION(S) UNDER 35 U.S.C. §119(e)

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below:

(List prior U.S. provisional applications.)

| PROVISIONAL APPLICATION NO. | FILING DATE (Day/Month/Year) |
|-----------------------------|---------------------------------|
| | |
| | |
| | |

CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S) UNDER 35 U.S.C. 120

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in such prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

(List prior U.S. applications or PCT international applications designating the U.S. for benefit under 35 U.S.C. §120.)

U.S. APPLICATIONS

STATUS (Check One)

| U.S. SERIAL NO. | U.S. FILING DATE (Day/Month/Year) | Patented | Pending | Abandoned |
|-----------------|--------------------------------------|--------------------------|--------------------------|--------------------------|
| 0 / | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 0 / | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

PCT APPLICATIONS DESIGNATING THE U.S.

STATUS (Check One)

| PCT APPLN. NO. | PCT FILING DATE (Day/Month/Year) | U.S. SERIAL NOS ASSIGNED (If any) | Patented | Pending | Abandoned |
|----------------|-------------------------------------|--------------------------------------|--------------------------|--------------------------|--------------------------|
| PCT/ | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| PCT/ | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

35 USC 119 PRIORITY CLAIM, IF ANY, FOR ABOVE LISTED U.S./PCT APPLICATIONS

| PRIORITY APPLICATION NO. | PRIORITY COUNTRY | FILING DATE (Day/Month/Year) | ISSUE DATE (Day/Month/Year) |
|-----------------------------|---------------------|---------------------------------|--------------------------------|
| | | | |
| | | | |

POWER OF ATTORNEY

As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office in connection therewith:

Charles R. Hoffmann, Reg. No. 24,102; Ronald J. Baron, Reg. No. 29,281; Gerald T. Bodner, Reg. No. 30,449; Alan M. Sack, Reg. No. 31,874; A. Thomas Kammer, Reg. No. 28,226; R. Glenn Schroeder, Reg. No. 34,720; Glenn T. Henneberger, Reg. No. 36,074; Irving N. Feit, Reg. No. 28,601; Anthony E. Bennett, Reg. No. 40,910; Gregory W. Bachmann, Reg. No. 41,593; Steven T. Zuschlag, Reg. No. 43,309; Susan A. Sipos, Reg. No. 43,128; Kevin E. McDermott, Reg. No. 35,946; Rod S. Turner, Reg. No. 38,639; Robert C. Morriss, Reg. No. 42,910; James F. Harrington, Reg. No. 44,741; Algis Anilionis, Reg. No. 36,995 and Justin K. Holmes, Reg. No. 42,666 each of them of HOFFMANN & BARON, LLP, 6900 Jericho Turnpike, Syosset, New York 11791; and Daniel A. Scola, Jr., Reg. No. 29,855; Salvatore J. Abbruzzese, Reg. No. 30,152; John Sopko, Reg. No. 41,321; Gloria K. Szakiel, Reg. No. 45,149; Mark E. Baron, Reg. No. 46,150; Christina L. Warrick, Reg. No. 45,690; Robert M. Rodrick, Reg. No. 27,086; Ludomir A. Budzyn, Reg. No. 40,540; and Linda T. Parker, Reg. No. 46,046, each of them of HOFFMANN & BARON, LLP, 1055 Parsippany Boulevard, Parsippany, New Jersey 07054.

PLEASE SEND CORRESPONDENCE TO:

Daniel A. Scola, Jr.
HOFFMANN & BARON, LLP
6900 Jericho Turnpike
Syosset, NY 11791

PLEASE DIRECT TELEPHONE CALLS TO:

Mark E. Baron
(973) 331-1700

DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

SIGNATURE(S)

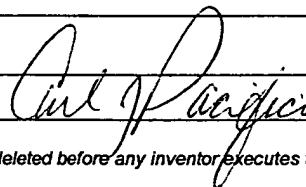
Full Name of Sole or First Inventor: Carl J. Pacifico

Country of Citizenship: USA

Residence Address: 14 Arundel Road; West Milford, NJ 07480

Post Office Address: Same as above

Date: July 30, 2001 Inventor's signature



NOTE: All above spaces identifying inventors must be completed or deleted before any inventor executes this application

PATENT

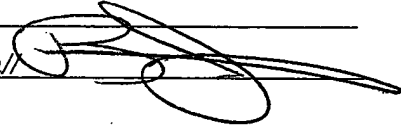
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | | | |
|-------------------|----------------------------------|-----------------|---------------|
| Applicant(s) | Pacifico, C. | Examiner: | Lien Tran |
| Serial No.: | 09/924,017 | Group Art Unit: | 1761 |
| Confirmation No.: | 3051 | Docket: | 1001-3 |
| Filed: | August 7, 2001 | Dated: | July 30, 2003 |
| For: | CHEMICAL LEAVENING INGREDIENT | | |

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

*I hereby certify this correspondence is being deposited
with the United States Postal Service as first class mail,
postpaid in an envelope, addressed to:
Commissioner for Patents, P.O. Box 1450, Alexandria,
VA 22313-1450*

On: July 30, 2003

By: Barbara Kemmlein 

DECLARATION OF CARL J. PACIFICO
PURSUANT TO 37 C.F.R. 1.132

1. I am the inventor of the subject matter of U.S. Serial No. 09/924,017 entitled "CHEMICAL LEAVENING INGREDIENT." I am making this declaration in order to accurately describe the prior art and in support of the patentability of the claimed invention.
2. By way of background, I received a bachelor's degree in Chemistry from Western Maryland College, and I received a Master's in business administration from Loyola College.
3. I have worked in the field of food sciences for 18 years. More particularly, I have worked in the field of encapsulated ingredients for Balchem Corporation for those 18 years, my work has led to the issuance of US Patent No. 6,251,478, as well as numerous publications including

"Enough is Enough", Food Beverage Asia, Dec. 2002. I have thorough read the Examiner's Office Action date May 27, 2003 as well as U.S. Patent No. 4,792,456 to Katz et al. It is my opinion that this reference is not relevant to the invention as claimed.

5. The present invention is a counterintuitive application of spray chilling techniques to form a microporous lipid coating to use as an encapsulant for a chemical leavening ingredient. A novel bread dough composition comprising such an ingredient is also provided. It is counterintuitive in that it was thought that it is not desirable to use an encapsulant with a high porosity encapsulating a chemical leavening ingredient because the encapsulant would not sufficiently protect the leavening ingredient, whether it be an acid or base in a bread dough composition.

6. It is known in the prior art to use fluid bed encapsulating techniques to coat leavening ingredients.

7. The Durkote® products referenced in the Katz reference are well known to me. It is further well known to those skilled in the art that the Durkote products used as chemical leavening agents are encapsulated by fluid bed techniques. It is known that the Durkote products are encapsulated by fluid bed techniques because personal conversations with the owner's of this production unit, as well as documented references of the technology as outlined in US patents such as 4,497,845 and 4,511,584 (attached herewith). Fluid bed coatings are continuous and substantially non-porous encapsulants. In fluid bed and modified fluid bed technology, a substrate particle is positioned in a zone where it is suspended in an ambient atmosphere as a singular and discrete particle. Once the particle has been suspended, and microdroplet of coating material is applied to the particle. The microdroplet of coating material is generally applied at a level where it can only flow over a portion of the substrate material. A series of microdroplets follows the initial application and is required to build up successive layers of coating material to essentially seal off the substrate material from the environment. This results in an encapsulated product which has a low or controllable leach rate.

8. Fluid bed encapsulation techniques provide a fluid-tight, non-porous seal on a particulate. A continuous coating results from fluid-bed encapsulation which essentially seals off the particulate from the environment. A fluid bed coating is essentially non-porous, and therefore cannot effectively be utilized in the bread dough composition of the present invention.

CONCLUSION

9. Based on my understanding of the cited reference, and my knowledge of the food arts and sciences, as well as known scientific principles in the field, there is no prior art disclosure which, at the time of our invention, would have suggested to the ordinary person skilled in the art that the microporous lipid coating of the present invention could effectively be made and utilized in an ingredient for leavening bread dough.

I do hereby declare that all the statements made herein of my own knowledge are true and that all statements made on my information and belief are believed to be true; and further that the statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that willful false statements may jeopardize the validity of the application or any patent issued thereon.

7/30/03
Date

Carl J. Pacifico
Carl J. Pacifico

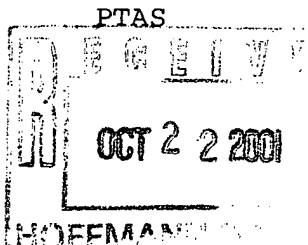
mab



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

OCTOBER 16, 2001

HOFFMANN & BARON, LLP
DANIEL A. SCOLA, JR.
6900 JERICHO TURNPIKE
SYOSSET, NY 11791



101813311A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 08/07/2001

REEL/FRAME: 012063/0380
NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

PACIFICO, CARL J.

DOC DATE: 07/31/2001

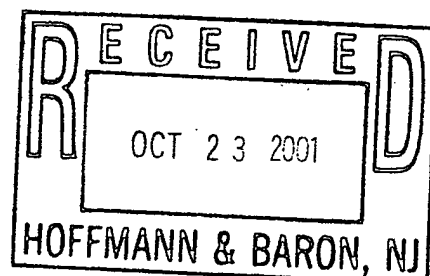
ASSIGNEE:

BALCHEM CORPORATION
2007 ROUTE 284
SLATE HILL, NEW YORK 10973

SERIAL NUMBER: 09924017
PATENT NUMBER:

FILING DATE: 08/07/2001
ISSUE DATE:

SHAREILL COLES, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS



08-16-2001

Packet No.: 1001-3

FORM PTO-1595 (Modified)
(Rev. 6-93)
OMB No. 0651-0011 (exp. 4/94)
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P08/REV02



EET

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

Tab settings → → → ▼

101813311

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):
Carl J. Pacifico

8/7/01

2. Name and address of receiving party(ies):

Name: **Balchem Corporation**Internal Address: **2007 Route 284**Street Address: **Same as above**City: **Slate Hill** State: **NY** ZIP: **10973**Additional name(s) & address(es) attached? ☐ Yes ☒ NoAdditional names(s) of conveying party(ies) ☐ Yes ☒ No

3. Nature of conveyance:

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other

Execution Date: **July 31, 2001**

4. Application number(s) or registration numbers(s):

If this document is being filed together with a new application, the execution date of the application is: **August 7, 2001**

A. Patent Application No.(s)

B. Patent No.(s)

08/10/2001 BABRAHA1 00000003 09924017

01 FC:581

40.00 OF

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: **Daniel A. Scola, Jr.**Internal Address: **HOFFMANN & BARON, LLP****6900 Jericho Turnpike**Street Address: **Same as above**City: **Syosset** State: **NY** ZIP: **11791**6. Total number of applications and patents involved: **1**7. Total fee (37 CFR 3.41):.....\$ **40.00**☒ Enclosed - Any excess or insufficiency should be credited or debited to deposit account☐ Authorized to be charged to deposit account

8. Deposit account number:

08-2461

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Mark E. Baron

Name of Person Signing

Signature

August 7, 2001

Date

Total number of pages including cover sheet, attachments, and document:

5

Attorney's Docket No.: 1001-3

PATENT

For: ☒ U.S. and/or ☒ Foreign Rights
For: ☒ U.S. Application;
☐ U.S. Provisional Application;
☐ U.S. Patent; or
☐ PCT Application
By: ☒ Inventors or ☐ Present Owners

ASSIGNMENT OF INVENTION

In consideration of the payment by ASSIGNEE to ASSIGNOR of the sum of One Dollar (\$1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration,

ASSIGNORS: (inventor(s) or person(s) or entity(ies) who own the invention)

Carl J. Pacifico

Name

14 Arundel Road

Address

West Milford, NJ 07480

US

Nationality

(If assignment is by person or entity to whom invention was previously assigned and this was recorded in PTO add the following)

Recorded on _____

Reel
Frame

hereby sells, assigns and transfers to

ASSIGNEE:

Balchem Corporation

(Type or print name of ASSIGNEE)

2007 Route 284

Address

Slate Hill, NY 10973

US

Nationality

and the successors, assigns and legal representatives of the ASSIGNEE,

(complete one of the following)

- ☒ the entire right, title and interest
☐ an undivided _____ percent (____%) interest

for the United States and its territorial possessions

- ☒ and in all foreign countries, including all rights to claim priority,

in and to any and all improvements which are disclosed in the invention entitled:

IMPROVED CHEMICAL LEAVENING INGREDIENT

and which is found in

(check and complete (a), (b), (c), (d), (e), (f), or (g))

- (a) ☒ U.S. patent application executed on even date herewith
(b) ☐ U.S. patent application executed on _____
(c) ☐ U.S. provisional application naming the above inventor(s) for the above-identified invention.
 ☐ Express Mail label No.: _____, mailed: _____
 ☐ To comply with 37 CFR 3.21 for recordal of this assignment, I, an ASSIGNOR signing below, hereby authorize and request my attorney to insert below the filing date and application number when they become known
(d) ☐ U.S. application Serial No. 0 / _____ filed on _____
(e) ☐ International application No. PCT/_____/_____
(f) ☐ U.S. Patent No. _____ issued
 ☐ A change of address to which correspondence is to be sent regarding patent maintenance fees is being sent separately.
(g) ☐ and any legal equivalent thereof in a foreign country, including the right to claim priority

and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuation, division, renewal, or substitute thereof, and as to Letters Patent any re-issue or re-examination thereof.

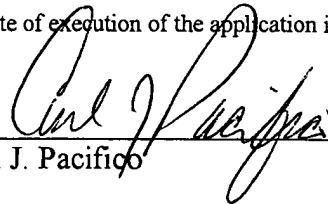
ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

ASSIGNOR further covenants that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, I/We have hereunto set hand and seal this

WARNING: Date of signing must be the same as the date of execution of the application if item (a) was checked above.

Date: X JULY 31, 2001
Date of signing

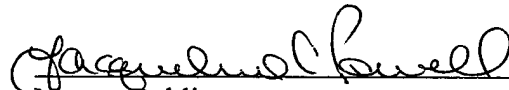
X 
Carl J. Pacifico

NOTE: No witnessing, notarization or legalization is necessary. If the assignment is notarized or legalized then it will only be prima facie evidence of execution 35 USC 261. Use next page if notarization is desired.

☒ Notarization or Legalization Page Added.

STATE OF
SS
COUNTY OF

On this 31 day of July, 2001, before me personally appeared Carl J. Pacifico to me personally known and known to me to be the person who signed the foregoing Assignment and acknowledged the signing of same as his/her free act and deed.


Notary Public

JACQUELINE A. POWELL
Notary Public, State of New York
No. 01PO6042086
Qualified in Orange County
Commission Expires May 15, 2003